

Work Order ID 53792

November 18, 2009 12:42:09 PM



Page 1

Item ID: D3500-1

Accept



Setup Start



Revision ID: C

Stop



Item Name: Saddle

Start Date: 18/11/2009 Start Qty: 20.00

Cust Item ID:

Required Date: 25/11/2009 Req'd Qty: 20.00

Customer:

Reference:

Approvals:

Process Plan: PL

Date: 09/11/18

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

100

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

HAAS CNC vertical machine #1

Memo

Program Batch No. 053792 Double check by: mf ☐ 1-Machine Step No 1
per Folio FA641 and inspect per attached Dimension Sheets ☐ 2-Machine Step
No 2 per Folio FA641 and inspect per attached Dimension Sheets ☐ 3-Machine
Step No 3 per Folio FA641 and inspect p

0.00

110

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Quality Control

Memo

0.00

120

0.00



QC8- Inspect parts - second check

QC

Quality Control

Memo

0.00

9
✓

9
✓

9
✓

pto →

/ SL 09/11/28

mf 09/11/28

/ SL 09/11/28

~~mf 09/11/27~~
mf 09/11/27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3500-1 PAR #: N/A Fault Category: Machin NCR: Yes No DQA: ls Date: 09.12.08
 Resolution: Acceptable Disposition: Use as-is QA: N/C Closed: ls Date: 09.12.11

NCR: <u>53792</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>09/11/28</u>	<u>100</u>	<u>5 saddles have .187 radius instead of .250 on flange of saddles</u>	<u>CP</u> <u>09.12.01</u> <u>per</u> <u>QSI 042</u>	<u>Acceptable</u>	<u>mm</u> <u>09/12/01</u>	<u>CP</u> <u>09.12.01</u> <u>per</u> <u>QSI 042</u>	<u>CP</u> <u>09.12.01</u> <u>per</u> <u>QSI 042</u>	<u>CP</u> <u>09.12.01</u> <u>per</u> <u>QSI 042</u>
		<u>- wrong tool mounted by operator</u>	<u>CP</u> <u>09.12.01</u>		<u>1</u>	<u>CP</u> <u>09.12.01</u>	<u>CP</u> <u>09.12.01</u>	<u>CP</u> <u>09.12.01</u>
		<u>R.C lack of attention operation on other shift.</u>	<u>CP</u> <u>09.12.01</u>	<u>✓</u>	<u>✓</u>	<u>CP</u> <u>09.12.01</u>	<u>CP</u> <u>09.12.01</u>	<u>CP</u> <u>09.12.01</u>

NOTE: Date & initial all entries

Work Order ID 53792

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Item ID: D3500-1

Accept



Setup Start



Revision ID: C

Stop



Item Name: Saddle

Start Date: 11/11/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 11/11/2009 Req'd Qty: 20.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

MD 09/12/02

Hand Finishing

X9

140

White Gloss(Ref:4.3.5.1) per QSI005 4.3-AJum

0.00



Powdercoat

Memo

0.00

START TIME:

10:45

OVEN TEMPERATURE:

6109-12-3

Powder Coating

300° FINISH TIME:

11:15

(9)

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

11 09/12/3

Quality Control

9

0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 53792

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Item ID: D3500-1

Accept



Setup Start



Revision ID: C

Stop



Item Name: Saddle

Start Date: 18/11/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 25/11/2009 Req'd Qty: 20.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

Identify as per dwg & Stock Location: 429

0.00



Packaging

Memo

0.00

Packaging

9/12/3

QW

SL

170

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/12/07

MF

09-12-04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

November 18, 2009 12:42:16 PM

Page 1

Work Order ID: 53792



Parent Item: D3500-1RevC



Parent Item Name: Saddle

Start Date: 18/11/2009

Required Date: 25/11/2009

Comments:

Start Qty: 20.00

Required Qty: 20.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D6102-013RevD		Manufactured	No			100	Each	10.0000	20.0000			

Saddle Billet

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
MAT	10	
41962	1	
46414	9	

9 mmo 29/11/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	53792
Description: Saddle		Part Number:	D3500-1
Inspection Dwg: D3500	Rev: C	Page 1 of 1	

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	By	Date
A	0.483	0.490		.485	.485	.485	.485		
B	1.175	1.185		1.177	1.178	1.178	1.178		
C	3.145	3.155		3.149	3.149	3.149	3.149		
D	1.175	1.185		1.177	1.178	1.178	1.178		
E	0.365	0.385		.368	.368	.368	.368		
F	0.490	0.510		.497	.501	.500	.501		
H									
I	R1.575	R1.595		R1.589	1.593	1.583	1.583		
J	0.240	0.260		.245	.245	.251	.250		
K	0.490	0.510		.498	.500	.500	.500		
L	3.590	3.650		3.622	3.620	3.620	3.620		
M	0.315	0.322		.318	.316	.316	.316		
N	0.256	0.262		.259	.259	.259	.259		
O	6.500	6.520		6.510	6.510	6.510	6.509		
P	5.990	6.010		5.999	6.001	6.001	6.000		
Q	2.820	2.830		2.825	2.825	2.825	2.825		
R	2.495	2.505		2.499	2.500	2.500	2.500		
S	2.245	2.255		2.249	2.250	2.250	2.250		
T	1.120	1.130		1.125	1.125	1.125	1.125		
U	0.540	0.560		.546	.550	.551	.550		
V	0.793	0.803		.798	.797	.797	.797		
W	R.240	R.260		.187	.187	.187	.187		
X	0.040	0.060		.058	.050	.050	.050		
Y	0.100	0.120		.100	.075	.075	.075		
AA	R1.125	R1.145		R1.135	1.136	1.130	1.130		
AB	R.490	R.510		R.500	.500	.500	.500		
AC	0.615	0.635		.630	.630	.630	.630		
AD	0.240	0.260		.253	.254	.259	.258		
AE	1.810	1.830		1.823	1.821	1.822	1.822		
AF	0.240	0.260		.250	.251	.252	.251		
AG	0.140	0.160		.153	.151	.154	.153		
AH	0.140	0.160		.153	.150	.152	.154		
AI	0.140	0.160		.156	.153	.155	.155		
Accept/Reject									

Measured by:	mmf
Date:	09/11/27

Audited by:	SL
Date:	09/11/27

Rev	Date	Change	Revised by	Approved
A	06.09.26	New Issue	KJ/EC	
B	08.10.07	Dimension H removed	KJ/DD	
C	08.11.28	Dimension 'M' revised	KJ/EC	

DART AEROSPACE LTD		Work Order: 53792
Description: Saddle		Part Number: D3500-1
Inspection Dwg: D3500		Rev: C
		Page 1 of 1

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	1	PS	36	47		
A	0.483	0.490			.485	.485	.485		
B	1.175	1.185			1.178	1.178	1.178		
C	3.145	3.155			3.149	3.149	3.149		
D	1.175	1.185			1.178	1.178	1.178		
E	0.365	0.385			.368	.368	.368		
F	0.490	0.510			.501	.500	.500		
H									
I	R1.575	R1.595			1.586	1.586	1.586		
J	0.240	0.260			.247	.247	.250		
K	0.490	0.510			.500	.500	.500		
L	3.590	3.650			3.620	3.620	3.620		
M	0.315	0.322			.316	.316	.316		
N	0.256	0.262			.259	.259	.259		
O	6.500	6.520			6.510	6.509	6.509		
P	5.990	6.010			6.000	6.000	6.001		
Q	2.820	2.830			2.825	2.825	2.825		
R	2.495	2.505			2.500	2.500	2.500		
S	2.245	2.255			2.250	2.250	2.250		
T	1.120	1.130			1.125	1.125	1.125		
U	0.540	0.560			.550	.550	.550		
V	0.793	0.803			.797	.798	.798		
W	R.240	R.260			.250	.250	.250		
X	0.040	0.060			.050	.050	.050		
Y	0.100	0.120			.080	.100	.100		
AA	R1.125	R1.145			1.133	1.132	1.132		
AB	R.490	R.510			.500	.500	.500		
AC	0.615	0.635			.630	.630	.630		
AD	0.240	0.260			.255	.256	.257		
AE	1.810	1.830			1.822	1.821	1.821		
AF	0.240	0.260			.251	.251	.251		
AG	0.140	0.160			.152	.150	.151		
AH	0.140	0.160			.152	.152	.154		
AI	0.140	0.160			.152	.154	.155		
Accept/Reject									

Measured by: <i>[Signature]</i>	Audited by: <i>[Signature]</i>
Date: 09/11/28	Date: 09/11/27

Rev	Date	Change	Revised by	Approved
A	06.09.26	New Issue	KJ/EC	
B	08.10.07	Dimension H removed	KJ/DD	
C	08.11.28	Dimension 'M' revised	KJ/EC	<i>[Signature]</i>

DART AEROSPACE LTD		Work Order: 53792
Description: Saddle		Part Number: D3500-1
Inspection Dwg: D3500 Rev: C		Page 1 of 1

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	1	28	29	4		
A	0.483	0.490			.485	.485			
B	1.175	1.185			1.178	1.178			
C	3.145	3.155			3.149	3.149			
D	1.175	1.185			1.178	1.178			
E	0.365	0.385			.368	.368			
F	0.490	0.510			.501	.501			
H									
I	R1.575	R1.595			1.585	1.586			
J	0.240	0.260			.250	.248			
K	0.490	0.510			.500	.500			
L	3.590	3.650			3.620	3.620			
M	0.315	0.322			.316	.316			
N	0.256	0.262			.259	.259			
O	6.500	6.520			6.510	6.510			
P	5.990	6.010			6.000	6.000			
Q	2.820	2.830			2.825	2.825			
R	2.495	2.505			2.500	2.500			
S	2.245	2.255			2.250	2.250			
T	1.120	1.130			1.125	1.125			
U	0.540	0.560			.550	.551			
V	0.793	0.803							
W	R.240	R.260			.250	.250			
X	0.040	0.060			.050	.050			
Y	0.100	0.120			.100	.100			
AA	R1.125	R1.145			1.132	1.133			
AB	R.490	R.510			.500	.500			
AC	0.615	0.635			.630	.630			
AD	0.240	0.260			.250	.256			
AE	1.810	1.830			1.825				
AF	0.240	0.260			.251	.251			
AG	0.140	0.160			.151	.150			
AH	0.140	0.160			.153	.154			
AI	0.140	0.160			.154	.154			
Accept/Reject									

Measured by: <i>[Signature]</i>		Audited by: <i>[Signature]</i>	
Date: 09/11/28		Date: 04/11/28	

Rev	Date	Change	Revised by	Approved
A	06.09.26	New Issue	KJ/EC	
B	08.10.07	Dimension H removed	KJ/DD	
C	08.11.28	Dimension 'M' revised	KJ/EC	<i>[Signature]</i>

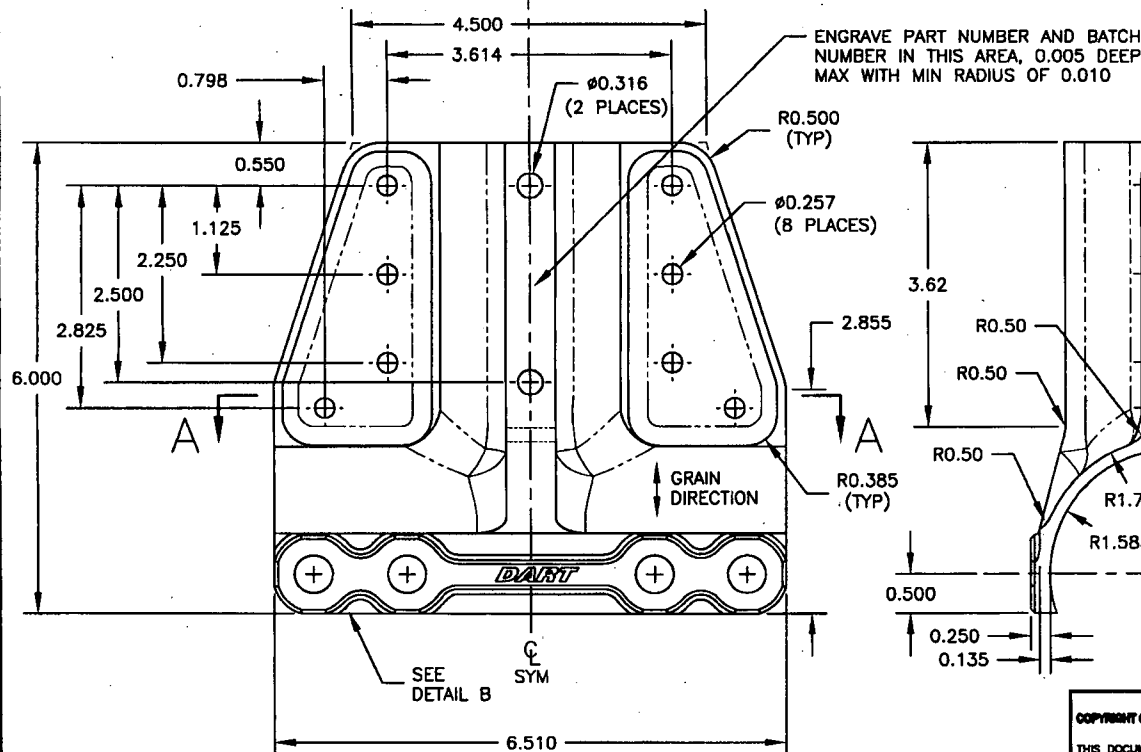
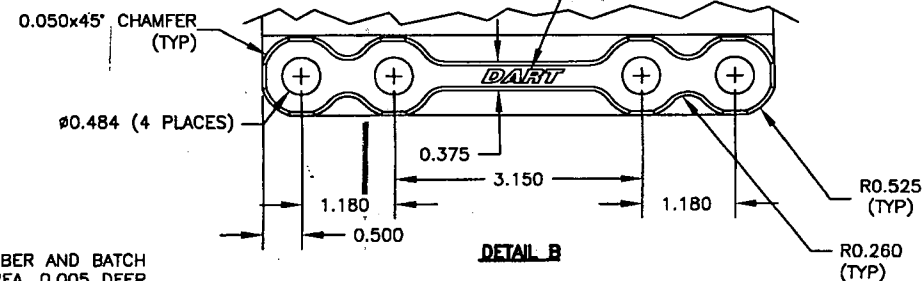
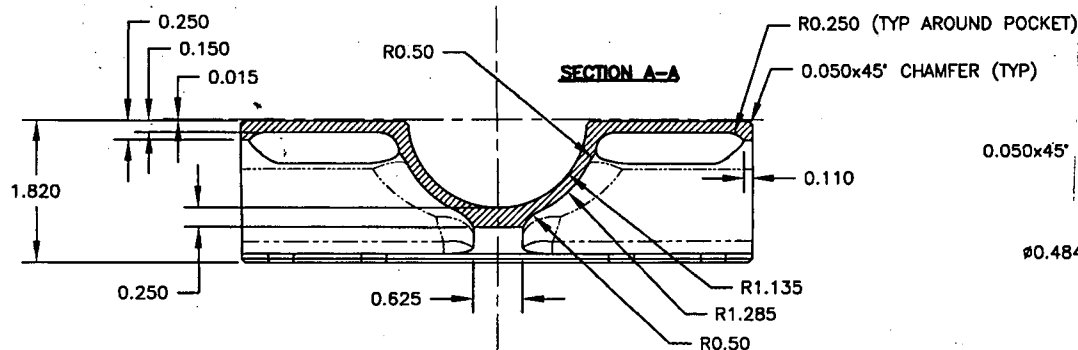
SHOP COPY
RETURN TO
ENGINEER
UNCONTROLLED

SUBJECT TO AMENDMENT

WITHOUT A PRO-
WORK ORDER

NO. 33792
17-09-11-16

ENGRAVE DART LOGO IN
THIS AREA TO A MAX
DEPTH OF 0.015 AND A MIN.
TOOL RADIUS OF 0.250



D3500-1 SADDLE

- 1) MATERIAL: 6061-T6/T651 (QQ-A-200/8 OR QQ-A-250/11) (MAKE FROM D6102-013 SADDLE BILLET, 6061)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1. POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- 3) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

RELEASED

06.08.15

C	06.06.30	MAT'L NOW 6061-T6/T651
B	06.05.29	CHANGE DIMS; MAT'L NOW 7075-T7351
A	06.04.18	NEW ISSUE
DESIGN	97	DRAWN BY PH
CHECKED	4	APPROVED 4
DATE	06.06.30	TITLE SADDLE
DART AEROSPACE LTD.	DART AEROSPACE LTD.	WINDERMERE, ONTARIO, CANADA
DRAWING NO.	D3500	REV. C
		SHEET 1 OF 1
		SCALE
		2-3

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